IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of	:	Cornelis Van Berkel, et al.
U.S. Serial No.	:	10/565,926
Filed	:	January 20, 2006
For	:	DEVICE AND METHOD FOR COMPOSING CODES
Group No.	:	2193
Examiner	:	Chat C. Do
Confirmation No.	:	9399

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Commissioner for Patents
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Sir:

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Applicants respectfully request review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a Notice of Appeal. The review is requested for the reason(s) stated in the arguments below, demonstrating the clear legal and factual deficiency of the rejections of some or all claims.

I.   STATUS OF THE CLAIMS

Claims 1-11 are pending and stand rejected.

II.   CLAIM REJECTION – 35 U.S.C. § 101

In the Final Office Action dated February 17, 2009, the Examiner rejected Claims 1-10 under 35 U.S.C. § 101 as being directed to non-statutory subject matter. In response to this rejection, Applicants amended Claim 1 to clarify that the units recited in Claim 1 are associated with a particular machine, i.e., a vector processor. In the Advisory Action dated April 30, 2009, the Examiner indicated that the amendment to Claim 1 would not be entered because it would raise new issues that would require further consideration and/or search. However, Claim 11 already recites a vector processor. Therefore, the amendment to Claim 1 does not raise new issues that would require further consideration and/or search as the added limitation of a vector processor should have already been considered and searched with regard to Claim 11.

Accordingly, Applicants respectfully submit that the Examiner erred in not entering the amendment to Claim 1.

III.   CLAIM REJECTION – 35 U.S.C. § 102

Claims 1-11 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Erdogan et al. (U.S. Patent No. 7,076,514, hereinafter referred to as "Erdogan").

Applicants respectfully submit that all limitations of the claimed invention must be considered when determining patentability. *In re Lowry*, 32 F.3d 1579, 1582, 32 U.S.P.Q.2d 1031, 1034 (Fed. Cir. 1994). In this case, the Examiner has failed to consider all limitations of the claimed invention.

Specifically, Claim 1 recites, "at least two weighted sum units, each weighted sum unit being arranged to provide an intermediate-code vector which is a weighted sum of a plurality of the basic-code vectors."

In the Advisory Action, the Examiner continues to suggest that the first summer and the second summer shown in FIG. 12 of Erdogan are weighted sum units by stating, "the weighted sum units are clearly seen in the cited reference as the units that performs summing/adding all the

weighted/scaled input data to genearte [*sic*] the intermediate code vector and the input data is the basic-code vectors." For ease of reference, the first and second summers of Erdogan referred to by the Examiner are described as follows:

> FIG. 12 illustrates a low complexity, efficient polyphase structure, according to an embodiment of the present invention. A first portion of the polyphase structure includes filters C_{11}, C_{12}, C_{13} and C_{14} for receiving inputs D_{11}, D_{12}, D_{21}, and D_{22} respectively. The outputs of filters C_{11}, C_{12}, C_{13} and C_{14} are then **combined by a first summer** and received by filter F_1. A second portion of the polyphase structure includes filters C_{21}, C_{22}, C_{23} and C_{24} for receiving inputs D_{11}, D_{12}, D_{21}, and D_{22} respectively. The outputs of filters C_{21}, C_{22}, C_{23} and C_{24} **are then combined by a second summer** and received by filter F_2. The outputs of filters F_1 and F_2 are combined by a third summer and received by a decimator structure. The decimator structure may include a Kth order integrator filter S_1, a downsampling function block N and a Kth order differentiator S_2. The decimator structure generates a digital sigma-delta output. (Col. 18, line 60-Col. 19, line 8.) (Emphasis added by the Applicants.)

As disclosed, the first and second summers of Erdogan simply sum the outputs of the filters. Applicants are unable to find any mention of taking **weighted** sums in Erdogan. Furthermore, Applicants are unable to find any scaling or weighting with factors/coefficients by the first and second summers as suggested by the Examiner.

In the Final Office Action, the Examiner attempts to compensate for this deficiency in the teaching of Erdogan by suggesting that this is a reasonable broadest interpretation of the claims in light of the specification. However, as established above, the first and second summers of Erdogan simply sum the outputs of the filters and cannot be said to be **weighted** sum units. Therefore, the Examiner is not taking a reasonable broadest interpretation of the claims. The Examiner is simply ignoring an element of the claim.

In distinct contrast to Erdogan, Paragraph [0009] of the Applicants' published application discloses:

> [0009] The device according to the invention is provided with at least two weighted sum units, which are able to make a selection out of a plurality of incoming basic-code vectors by means of a weighted sum operation, under the control of a configuration word. The elements of this configuration word represent the weighting factors which are used to select or deselect a basic-code vector. The selected basic-

code vectors are added together and the result of the weighted sum operation is then output as an intermediate-code vector. Subsequently, the intermediate-code vectors are added together by an add unit and output as a composite-code vector. The ability to make selections out of a plurality of incoming basic-code vectors and to add intermediate-code vectors into a composite-code vector, together with the ability to configure the operations of the functional units of the device by means of configuration words, increases the flexibility of the device significantly. This flexibility is needed to support a variety of transmission standards.

Accordingly, even if one were to take a reasonable broadest interpretation of the claims in light of the specification as suggested by the Examiner, the outputs of the first and second summers of Erdogan still cannot be said to be **weighted** sum units as described in Applicants' specification.

Furthermore, the Examiner continues to suggest that the output of the first and second summers of Erdogan is an **intermediate-code vector** which is a weighted sum of a plurality of the **basic-code vectors**. However, the first and second summers of Erdogan relate to analog to digital conversion (ADC). The first and second summers of Erdogan do not relate to standards and codes. Therefore, their outputs cannot be said to be an intermediate-code vector.

The Examiner attempts to compensate for this deficiency in the teaching of Erdogan by suggesting that the claims do not explicitly exclude interpreting A/D conversion as codes. However, claims are to be interpreted in light of the specification, and Paragraphs [0002] to [0009] of the Applicants' published application clearly excludes interpreting a sum of filtered binary digital signals as an intermediate-code vector which is a weighted sum of a plurality of the basic-code vectors. Again, the Examiner is not taking a reasonable broadest interpretation of the claims. The Examiner is simply ignoring an element of the claim.

Independent Claim 11 recites limitations analogous to the limitations emphasized above with regard to the rejection of Claim 1.

Accordingly, for the reasons established above, Applicants respectfully submit that the Examiner has failed to establish a *prima facie* of anticipation with regard to Claims 1-11 in that the Examiner has failed to consider all limitations of the claimed invention.

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CONCLUSION

As a result of the foregoing, the Applicants assert that the claims in the Application are in condition for allowance over all art of record, and that the rejections are both factually and legally deficient, and respectfully requests this case be returned to the Examiner for allowance, or, alternatively, further examination.

If any issues arise, or if the Examiner has any suggestions for expediting allowance of this Application, the Applicant respectfully invites the Examiner to contact the undersigned at the telephone number indicated below or at *rmccutcheon@munckcarter.com.*
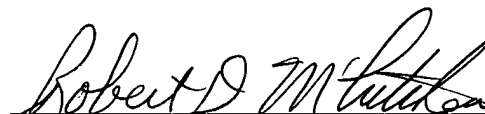
The Commissioner is hereby authorized to charge any additional fees connected with this communication or credit any overpayment to Deposit Account No. 50-0208.

Respectfully submitted,

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